REMARKS

Applicant has carefully considered this Application in connection with the Examiner's Action, and respectfully request reconsideration of this Application in view of the above Amendment and the following remarks.

Pending in the application are Claims 1-2, 4, 6-7, 9-11, 13-14, and 16-24. Applicants have cancelled Claims 3, 5, 8, 12, and 15.

Applicant has amended Claims 1 and 10 to specify that the anchor ligand is 4,4'-dicarboxy-2,2'-biquinoline ("bqda"), the metal cation is copper ("Cu"), and the secondary ligand is 2,2'-biquinoline ("biq"), 2,9-dimethyl-1,10-phenanthroline ("mph"), 2,9-dimethyl-2,2'-bipyridine ("mbp"), 4,7-diphenyl-1,10-phenanthroline ("bap"), or 1,10-phenanthroline ("phen"). Support for this amendment can be found on Pages 12 – 15 of the Specification in Examples 2 – 6 showing Compounds 1 – 5.

I. Rejections Under 35 U.S.C. §112, First Paragraph

Claims 1 – 24 stand rejected under 35 U.S.C. §112, first paragraph, for being indefinite. Applicant respectfully asserts that, in view of the above amendments and the arguments below, the claims are not indefinite.

A. Claims 1 and 10

In Claims 1 and 10, the Examiner has asserted that the terms "anchor ligand, secondary ligand, and metal cation" are indefinite as failing to define specific structures and a specific metal. Applicant has amended Claims 1 and 10 to specify the structures for the anchor ligand and secondary ligand, as well as the specific metal. Applicant respectfully requests that this amendment fully addresses the Examiner's rejection and that these terms are definite in the claims as amended.

B. Claim 1

In Claim 1, the Examiner has asserted that specific steps and reagents are not listed, rendering the claim indefinite. Applicant respectfully disagrees. Specific steps and reagents for performing the method described in Claim 1 are fully listed and described in the specification.

In determining the definiteness of a claim, **the claim language cannot be read in a vacuum**. Rather, the language of the claim is analyzed in light of **(A) the content of the particular application disclosure**, (B) the teachings of the prior art; and (C) the claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made. *See* Manual of Patent Examining Procedure ("MPEP") §2173.02. Thus, if the specification of the application provides sufficient explanation for the claim language, then the claim is not indefinite. The claims are only required to set out the subject matter with a **reasonable degree of clarity**. *See id.* Furthermore, breadth of a claim is not equated with indefiniteness. *See* MPEP §2173.04.

In this case, the specification provides ample explanation for the exact steps involved in the method of synthesizing a photosensitizer according to the claims. Figure 1 clearly illustrates the steps involved in the process, and Pages 7 – 9 of the Specification describe in detail the specific reagents that can be used. In particular, the Specification clearly spells out the following:

- **Specific examples of the solvent** in which the anchor ligand can be dissolved, including water, methanol, ethanol, isopropanol, and 14 others (Paragraph 26);
- **Process for attaching the anchor ligand**, including preferable concentrations, preferable time periods, preferable temperatures, specific steps for attachment, and ways to determine the degree of attachment (Paragraphs 26 – 27);
- **Process for incorporating the transition metal cation**, including preferable concentrations, preferable time periods, preferable temperatures, and ways to determine the degree of absorption of the metal cation (Paragraphs 28 – 29);

- **Process for attaching the secondary ligand**, including preferable concentrations, preferable time periods, preferable temperatures, specific steps for attachment, and ways to determine the degree of absorption of the secondary ligand (Paragraphs 30 – 32);
- **Specific examples of the solvent** in which the secondary ligand can be dissolved, which are the same as those listed for the anchor ligand (Paragraph 30); and
- **Six working examples** describing how the photosensitizers were prepared (Examples 1 – 6).

In view of the voluminous details pertaining to the method for synthesizing the photosensitizers given in the specification, it is clear that Claim 1 is not indefinite. A person of ordinary skill in the art, when reading the claims in light of the specification, would be fully informed as to their scope and to the meaning of the claim terms. Thus, Claim 1 is patentable under 35 U.S.C. §112, second paragraph.

C. Claims 2 – 8 and 11 – 18

The Examiner asserts that the term "comprises" is indefinite as it is used within these claims. Applicants have amended Claims 2 – 8 and 11 – 18 to remove the word "comprises." The term "is" has been substituted in Claims 2, 4, 11, 14, and 16. Claims 6 and 13 have been amended to state that the metal cation, of M, can possess the additional components listed in some embodiments. Claims 7 and 17 have been amended to clarify that the structure of the secondary ligand is that listed in the claim. The remaining claims have been cancelled. Applicant respectfully asserts that these claims are no longer indefinite in view of these amendments.

D. Claims 6, 13, and 19

The Examiner has asserted that Claims 6, 13, and 19 are indefinite because they use the terms "inorganic ligands, organic ligands, and counterions" but do not define these terms. Applicant respectfully asserts that a person of skill in the art understands the meanings of these

terms. A ligand is commonly known as "a group, ion, or molecule coordinated to a central atom or molecule in a complex." See Dictionary, Merriam Webster, 2006. Furthermore, people of ordinary skill in the art certainly understand the meaning of the terms "organic" and "inorganic." A counterion is also commonly understood to be "an ion having a charge opposite to that of the substance with which it is associated." *See* Dictionary, Merriam Webster, 2006.

In addition, a person of ordinary skill in the art would understand the meaning of these terms and what they encompass because of the explanation given in the specification. The inorganic and organic ligands and counterions are associated with the metal cation. People of ordinary skill understand that metal cations have associated charges and are typically associated with other molecules in order to counterbalance the charge. As stated in the specification, the metal cation can be associated with any combination of ligands and counterions that are required to "complete the coordination sphere and balance the charge." *See* Page 8, Paragraph 28. Preferably, there are between two and six ligands and/or counterions based on the valency of the metal cation. *See id.* People of ordinary skill in the art would understand the types of ligands and counterions that can be complexed with a metal cation to counterbalance the charge. Thus, these terms are elementary and therefore definite without further elaboration. The specification also gives an example of an organic ligand and counterion complexed with a metal cation in Examples 1 and 2. The metal cation copper is shown as being complexed with four acetonitrile organic ligands, CH_3CN, as well as a counterion, PF_6, to create a $[Cu(CH_3CN)_4]PF_6$ complex. *See* Page 11, Paragraph 39 and Page 12, Paragraph 44.

E. Claims 10 – 24

The Examiner has rejected Claims 10 – 24 as being indefinite for using the term "composition." Applicant has amended these claims to replace the term "composition" with the term "photosensitizer." Thus, Applicant respectfully asserts that this rejection is overcome.

F. Claim 19

Applicant respectfully asserts that Claim 19 is definite despite its use of the variable "L." The variable "L" is present in the structure. Namely, it is shown complexed to the variable "M" in the center of the area between the anchor ligand and the secondary ligand. The variable "M" was previously defined in Claim 10, upon which Claim 19 depends, as a metal cation. Thus, the combination of variables "ML_{x-4}" shown in the general structure represents a metal cation, "M," complexed to an inorganic ligand, organic ligand, counterion, or a combination thereof, "L," in a number from 0 to 2. This is clearly illustrated in the general structure and all variables are defined. Thus, this claim is definite.

II. Claim Objections

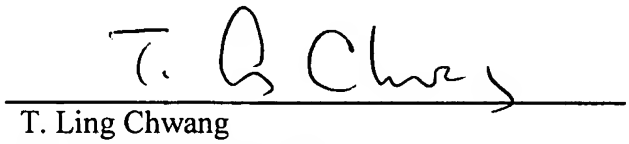
The Examiner has objected to Claims 1 – 19 for containing subject matter that was not elected. Applicant has amended Claims 1 and 10 to specify that the anchor ligand is 4,4'-dicarboxy-2,2'-biquinoline ("bqda"), the metal cation is copper ("Cu"), and the secondary ligand is 2,2'-biquinoline ("biq"), 2,9-dimethyl-1,10-phenanthroline ("mph"), 2,9-dimethyl-2,2'-bipyridine ("mbp"), 4,7-diphenyl-1,10-phenanthroline ("bap"), or 1,10-phenanthroline ("phen"). These claims therefore correspond to the subject matter elected in this application, which includes the structures shown on Pages 12 – 15 of the Specification in Compounds 1 – 5. Applicant respectfully requests that this objection be withdrawn.

III. Conclusion

Applicant respectfully submits that, in light of the foregoing Amendment and comments, Claims 1-2, 4, 6-7, 9-11, 13-14, and 16-24 are in condition for allowance. A Notice of Allowance is therefore requested.

If the Examiner has any other matters which pertain to this Application, the Examiner is encouraged to contact the undersigned to resolve these matters by Examiner's Amendment where possible.

Respectfully submitted,



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